

LISTING OF THE CLAIMS

1. (Withdrawn) A method for characterising OSI-materials, comprising:
introducing the material into a measurement cell;
subjecting the material to a gas mixture containing oxygen;
permitting a certain time or one or more time intervals to elapse;
measuring and oxygen concentration of a defined volume part of the gas mixture using a measurement circuit, in which the oxygen concentration together with the time component represents a characterisation of the OSI-material,
wherein the OSI-material in the measurement cell is subjected to the gas mixture circulated in a closed reaction circuit, and the defined volume part is conveyed into the measurement circuit.
2. (Withdrawn) The method according to claim 1, wherein O₂-scavengers and/or O₂-indicators are applied as the OSI-materials.
3. (Withdrawn) The method according to claim 1, wherein, for characterising the material in the measurement cell, in particular an O₂-scavenger, at least one of: (i) an oxygen reduction in a gas flow in dependence on a mass of the material is measured as a capacity variable; and (ii) the temporal change of the oxygen reduction is measured as a kinetic variable.
4. (Withdrawn) The method according to claim 1, wherein a colour and/or a colour change of the material in dependence on the oxygen concentration is measured, for characterising the material in the measurement cell, in particular an O₂-indicator.
5. (Withdrawn) The method according to claim 4, wherein the colour and/or the colour change and/or the colour change in dependence on an integral of the oxygen concentration multiplied by time is measured.
6. (Withdrawn) The method according to claim 4, wherein, with O₂-scavenger/O₂-indicator systems, the colour change of the O₂-indicator in dependence on the residual capacity of the O₂-

scavenger is determined.

7. (Withdrawn) The method according to claim 1, wherein, for initialising the OSI-material, the gas flow in the reaction circuit is subjected to humidity.

8. (Withdrawn) The method according to claim 1, wherein, for initialising the OSI-material, the measurement cell is subjected to UV-radiation.

9. (Withdrawn) The method according to claim 8, wherein an initialisation point or initialisation region of the OSI-material is determined depending on at least one of a relative humidity, an intensity, and a wavelength region of the radiation.

10. (Currently Amended) A device for characterising OSI-materials, comprising:

a closed reaction circuit having a device for supplying a gas flow containing oxygen, a pump for delivery of the gas flow, and a measurement cell for receiving the OSI-material; and

a closed measurement circuit having a device for supplying a gas flow, a pump for delivery of the gas flow and a sensor arrangement for detecting oxygen, and an evaluation unit,

wherein a sample loop with a defined volume is arranged in the closed reaction circuit, which for conveying the defined volume of the gas flow of the reaction circuit ~~may~~ is operable to be switched into the closed measurement circuit from the closed reaction circuit, and the sample loop is operable to be switched into the closed reaction circuit from the closed measurement circuit.

11. (Previously Presented) The device according to claim 10, wherein the measurement circuit is a closed measurement circuit and comprises a device for the supply of the gas flow, a pump for delivery of the gas flow, wherein a part of the reaction circuit, with the defined volume, may be switched into the measurement circuit via valves.

12. (Previously Presented) The device according to claim 11, wherein the measurement circuit comprises a switch-over branch which may be switched into the reaction circuit via the valves when the part of the reaction circuit with the defined volume is switched into the measurement circuit.

13. (Previously Presented) The device according to claim 10, wherein the sensor arrangement contains at least one oxygen-sensitive sensor, and the evaluation unit contains an integrator.

14. (Previously Presented) The device according to claim 10, wherein the device for the supply of the gas flow containing oxygen into the reaction circuit is connected to a humidification unit, which subjects the gas flow to a humidification for the initialisation of the material in the measurement cell.

15. (Previously Presented) The device according to claim 10, wherein the measurement cell is transparent to settable wavelength regions.

16. (Previously Presented) The device according to 15, wherein a UV-radiation source which irradiates the material for its initialisation, is allocated to the measurement cell.

17. (Previously Presented) The device according to claim 10, further comprising a device for measuring the colour and/or the colour change of the material allocated to the measurement cell.

18. (Previously Presented) The device according to claim 10, wherein the reaction circuit comprises a sample loop containing the defined volume part, which may be switched into the measurement circuit via multi-way valves.

19. (Previously Presented) The device according to claim 10, wherein the components of the reaction circuit and of the measurement circuit are encapsulated.